

# EUROPEAN PATENT OFFICE

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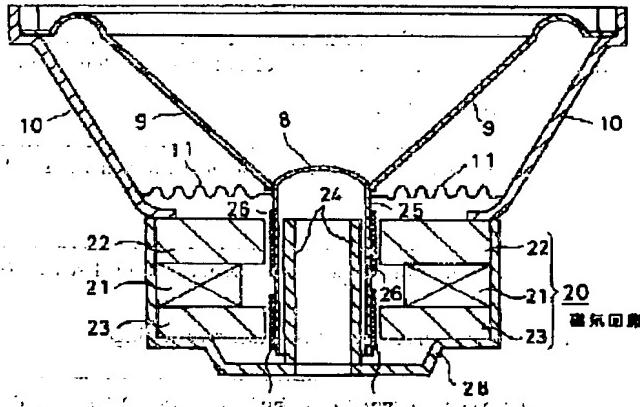
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TITLE : SPEAKER EQUIPMENT



**ABSTRACT :** PURPOSE: To improve the drive efficiency of a diaphragm connecting to a coil bobbin by disposing a voice coil respectively to two magnetic air gaps between upper and lower plates of a magnet arranged to the outside of the coil bobbin and a yoke and driving the voice coil with a single magnetic circuit.

**CONSTITUTION:** Suppose that an upper side of a magnet 21 is the N pole and a lower side is the S pole, then a magnetic flux shown in broken lines (magnet 21 → plate 22 → yoke 24 → plate 23 → magnet 21) is generated and a magnetic air gap is formed between the plate 22 and the yoke 24, a magnetic flux  $\varphi_1$  is produced between them and a magnetic air gap is formed between the plate 23 and the yoke 24. A magnetic flux  $\varphi_2$  is produced between them. A voice coil 26 is arranged in the air gap in which the magnetic flux  $\varphi_1$  is produced and a voice coil 27 is arranged in the air gap in which the magnetic flux  $\varphi_2$  is produced. Then a coil bobbin 25 on which the coils 26, 27 are wound is vibrated based on a voice signal fed to the coils 26, 27, and the cone 9 fitted to the bobbin 25 is vibrated and the voice signal based on the vibration is outputted.

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